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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,832	07/12/2001	John Border	PD-201025	1395

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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,832

Applicant(s)

BORDER ET AL.

Examiner

Jeffrey R. Swearingen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/12/2005 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification did not explain how local acknowledgement of received messages over the connections is performed, and only states that it is performed in paragraph 56, page 13 of the specification. The specification did not explain how multiple compression schemes can be deployed over the same connection or how said multiple compression is selected and implemented (i.e. connection basis, packet basis, etc.) One of ordinary skill in the art would suffer the burden of undue experimentation in implementation of the invention given the lack of necessary and pertinent information provided in the specification concerning the implementation of the individual multiple types of compression in the invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1, 10, 19 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. It is unclear in claims 1, 10, 19 and 28 what is claimed by *the data compression module concurrently applies different types of compression on the individual connections*. It is unclear if compression is applied separately on a connection. It is unclear if certain packets on a connection are selectively compressed and other packets on the same connection are not compressed.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-36 are directed toward a device that spoofs IP addresses, which is a crucial component in the creation and deployment of non-solicited email messages, or spam. Such devices are considered illegal under the CAN-SPAM act of 2004, herein included.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baras et al. ("Fast Asymmetric Internet Over Wireless Satellite-Terrestrial Networks," MILCOM 97 Proceedings, Nov. 3-5 1997, Annual Military Communications Conference) in view of Takagi et al. (EP 0 903 905 A) in further view of Walrand (Communications Networks: A First Course, Boston: McGraw-Hill, 1998).

11. In regard to claims 1, 10, 19, and 28, Baras discloses *a spoofing module configured to selectively spoof a plurality of connections associated with a plurality of hosts based upon corresponding spoofing*

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criteria and to provide local acknowledgement of received messages over the connections [Baras, 375, The TCP Spoofer Kernel]; *a connection module configured to multiplex the plurality of connections over a common backbone connection* [Baras, Figure 1, wherein the satellite link is a common backbone connection]; *and a path selection module configured to determine a path among a plurality of paths to transmit the received messages based upon path selection criteria* [Baras, 376 selects which path to use by utilizing TCP port numbers]. Baras fails to disclose prioritization and data compression. However, Takagi in the same field of endeavor discloses an access prioritization module based on criteria [Takagi, column 28, lines 14-41]. Baras and Takagi both deal with high speed Internet using TCP being transmitted over a wireless radio network; in the case of Baras, the wireless radio network is a satellite link. It would be obvious to one of ordinary skill in the art to combine the teachings of Baras and Takagi because Baras deals with multiple applications with different service requirements [Baras, 375-376] and Takagi wishes to improve the performance of TCP by prioritizing the transfer of IP datagrams so that IP datagrams with a higher priority level [greater service requirement] would be broadcast before an IP datagram with a lower priority level [lesser service requirement] [Takagi, column 28, lines 14-33]. The combination of Baras and Takagi fails to disclose the use of data compression. However, Walrand discloses the foundations of data compression [Walrand, 250-261, 8.4 "Foundations of Compression"] on a computer network. Baras and Takagi are both TCP networks, and Walrand is in the same field of endeavor because it is a generalized computer networking textbook covering basic principles. Therefore, it would be obvious to one of ordinary skill in the art to combine Walrand's data compression techniques in many possible ways with the Baras and Takagi combination for the purpose of improving performance of the system. [Baras, 375, Takagi, column 28, lines 31-33, Walrand, 238 and 250].

12. In regard to claims 4, 13, 22, and 31, Baras in view of Takagi in further view of Walrand is applied as in claims 1, 10, 19 and 28. Baras further discloses *wherein the spoofing module is configured to allocate a connection control block among a plurality of connection control blocks corresponding to a spoofed connection, each of the plurality of connection control blocks storing information related to the plurality of connections, wherein the quantity of connection control blocks is configurable*. Baras

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discloses allocating a new CCB upon detection of a new connection. The CCB is released when the connection is terminated, aborted, or has been idle. [Baras, 375, Data Structures and Idle Connection].

13. In regard to claims 2, 11, 20 and 29, Baras in view of Takagi in further view of Walrand is applied as in claims 4, 13, 22 and 31. Baras further discloses *a mapping table to store connection control block allocation information*. "To enable fast searching for the CCB of a received segment a hash table is maintained and each CCB is hashed to a bucket based on the tuple <hybrid terminal IP address, hybrid terminal TCP port number, Internet host IP address, Internet TCP port number>." [Baras, 375]

14. In regard to claims 3, 12, 21 and 30, Baras in view of Takagi in further view of Walrand is applied as in claims 4, 13, 22 and 31. Baras further discloses *a hash function logic configured to output pointers corresponding to the plurality of connection control blocks*. "To enable fast searching for the CCB of a received segment a hash table is maintained and each CCB is hashed to a bucket based on the tuple <hybrid terminal IP address, hybrid terminal TCP port number, Internet host IP address, Internet TCP port number>." [Baras, 375]

15. In regard to claims 5, 14, 23 and 32, Baras in view of Takagi in further view of Walrand is applied as in claims 1, 10, 19 and 28. Baras discloses use of a satellite link. [Baras, 372, "...a segment of this hybrid network involves a geostationary satellite..."]. Baras in view of Takagi fails to show that the satellite link can be encrypted. However, Walrand discloses that in order to protect a computer network from intrusions and threats, various security measures should be put into place.

"Cryptography...concerns the development of mechanisms that protect the contents of messages or the identity of their authors. We start by discussing the general principles of cryptography...Encryption and hashing are primitive operations that are used to build security systems that we examine in Section 8.3." [Walrand, 241-250]. It would be obvious to one of ordinary skill in the art to add encryption to many parts of the Baras/Takagi/Walrand invention, including the satellite link, for the purposes of protecting data from being read by someone other than its intended recipient.

16. Regarding claims 6, 15, 24 and 33, Baras in view of Takagi in further view of Walrand is applied as in claims 1, 10, 19 and 28. Baras and Takagi both further disclose using the Transmission Control Protocol. [Baras, 374, Takagi, column 1, lines 15-20, column 13, lines 25-58].

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17. In regard to claims 7, 16, 25 and 34, Baras in view of Takagi in further view of Walrand is applied as in claims 1, 10, 19 and 29. Takagi further discloses *the spoofing criteria includes at least one of Destination IP address; Source IP address; TCP port numbers; TCP options; or IP differentiated services field*. Takagi discloses using the header information of the IP datagram to pass datagrams through virtual channels (TCP spoofing). The IP datagram information used includes source IP address, source port number, destination IP address, destination port number. [Takagi, column 14, lines 25-33, column 16, lines 47-58, column 17, lines 5-17]

18. In regard to claims 8, 17, 26 and 35, Baras in view of Takagi in further view of Walrand is applied as in claims 1, 10, 19 and 29. Takagi further discloses *the prioritization criteria includes at least one of Destination IP address; Source IP address; IP next protocol, TCP port numbers, UDP port numbers; or IP differentiated services field*. Takagi discloses using the IP datagram to select the priority level. The IP datagram includes the destination IP address and the source IP address. [Takagi, column 17, lines 5-17, column 28, line 34 – column 29, line 3]

19. in regard to claims 9, 18, 27 and 36, Baras in view of Takagi in further view of Walrand is applied as in claims 1, 10, 19 and 29. Baras further discloses *the prioritization module sets priority of one of the received messages, the one message being an IP packet, wherein the path selection criteria includes at least one of the priority of the IP packet, Destination IP address, Source IP address, IP next protocol, TCP port numbers, UDP port numbers or IP differentiated services field*. Baras discusses selecting the path based upon TCP port numbers. [Baras, 376, "In this hybrid scheme..."]

Response to Arguments

20. Applicant's arguments filed 8/12/05 have been fully considered but they are not persuasive.

21. Applicant argued that Walrand failed to disclose the specific compression claimed by Applicant, namely *concurrently applying different types of compression on the individual connections*. Inadequate support existed in the cited portion of the specification, page 14, paragraph [59], to explain what Applicant meant by the concurrent application of different types of compression. One of ordinary skill in the art would be unable to implement this function of the machine based upon the claim language. Therefore the

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broadest reasonable interpretation of compression must be used in order to analyze the claim. In the broadest reasonable interpretation, Walrand's explanation of compression would be sufficient to overcome *concurrently applying different types of compression on the individual connections* given the unclear claim language and lack of clarification given by the specification.

22. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

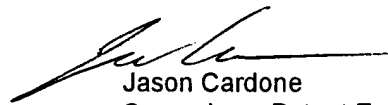
The "Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003" or the "CAN-SPAM Act of 2003". S.877, 108th Congress of the United States of America. Enacted January 1, 2004.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Cardone
Supervisory Patent Examiner
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